

Application No.: 09/700,372

Docket No.: 21625-00032-US

AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for manufacturing an article, comprising:
providing a three-dimensional mould and a control unit to enable at least adjustment of a voltage level of one or more treatment blocks of the mould;
providing a multi-component polymer-based material; (1), wherein the material (1) is a multi-component polymer-based material comprising ingredients (1a, 1b) that are individually heated heating components of the multi-component polymer-based material by with a heating unit; and mixed
mixing the components together and spraying the multi-component polymer-based material in an electrically charged state into an electrical field (E) onto a three-dimensional the mould (2) with a single-spray processing unit to form a coating on the mould, which wherein the mould is not grounded, and wherein mixing of the components and spraying of the multi-component polymer-based material are carried out simultaneously; and
removing the article from the mould (2) following sufficient curing of the coating.
2. (canceled)
3. (currently amended) A method as set forth in claim 1, further comprising treating surface of said mould (2) with one or more surface-tension regulating surfactants selected from a group consisting of a silicon-based, a polyolefine-based and a corresponding agent to facilitate demoulding/stripping of the article from the mould (2), wherein the surface tension of the material (1) is adjusted relative to the surface tension of the mould.
4. (previously presented) A method as set forth in claim 1, wherein the article is an elastic product selected from a piece of clothing, a glove, or a condom.
5. (canceled)
6. (currently amended) A method as set forth in claim 1, wherein a desired wall thickness of the article is achieved at any given point on the surface of the mould by providing the mould (2) with

Application No.: 09/700,372

Docket No.: 21625-00032-US

two or more treatment blocks (~~Li~~), which are set at voltage levels substantially different from each other.

7. (currently amended) A method as set forth in claim 1, wherein the spraying the polymer-based material comprises one or more changes in process parameters, the process parameters selected from the group consisting of volume flow of the polymer-based material, viscosity of the polymer-based material or a component thereof, and the electrical field (E), and the voltage level in the one or more treatment blocks (Li) of the mould (2).

8. (currently amended) An apparatus for manufacturing a thin-walled article, the apparatus comprising:

two or more reservoirs that contain a polymer-based material that comprises one or more components;

one or more pressurizing units to adjust the pressure of the polymer-based material;

a single-processing unit to electrically charge the polymer-based material and form a spray of electrically charged material onto a three-dimensional mould, which wherein the mould is not grounded, and wherein the single-processing unit is adapted to simultaneously mix the components, electrically charge the material and spray the material; and

a control unit to adjust one or more process parameters at least a voltage level of one or more treatment blocks of the mould.

9. (currently amended) An apparatus as set forth in claim 8, wherein the apparatus further comprises a heating unit (~~01~~) to heat the polymer-based material (~~1~~).

10. (currently amended) An apparatus as set forth in claim 8 wherein the mould (~~2~~) comprises at least two treatment blocks (~~Li~~) whose voltage levels are independently adjustable.

11. (canceled)

12. (canceled)

Application No.: 09/700,372

Docket No.: 21625-00032-US

13. (previously presented) A method as set forth in claim 3, wherein the article is an elastic product selected from a piece of clothing, a glove, or a condom.

14. (canceled)

15. (previously presented) A method as set forth in claim 3, wherein the material is a multi-component polymer-based material comprising at least two ingredients that are individually heated by a heating unit, mixed together, and charged electrically.

16. (canceled)

17. (previously presented) A method as set forth in claim 3, wherein a desired wall thickness of the article is achieved at any given point on the surface of the mould by providing the mould with two or more treatment blocks, which are set at voltage levels substantially different from each other.

18. (previously presented) A method as set forth in claim 4, wherein a desired wall thickness of the article is achieved at any given point on the surface of the mould by providing the mould with two or more treatment blocks, which are set at voltage levels substantially different from each other.

19. (currently amended) A method as set forth in claim 15, wherein a desired wall thickness of the article is achieved at any given point on the surface of the mould by providing the mould with two or more treatment blocks, which are set at voltage levels substantially different from each other.

20. (canceled)

21. (currently amended) The apparatus of claim 8, wherein the polymer-based material includes at least two components ~~which are mixed in the processing unit.~~

22. (currently amended) The apparatus of claim 8, wherein the control unit is adapted to control ~~the~~ one or more process parameters is selected from the group consisting of volume flow of the

Application No.: 09/700,372

Docket No.: 21625-00032-US

polymer-based material, viscosity of the manufacturing material or a component thereof, and the electrical field, ~~and voltage level in the one or more treatment blocks of the mould.~~